Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

In the Matter of)	
)	
Closed Captioning of Internet Protocol-Delivered)	MB Docket No. 11-154
Video Programming: Implementation of the)	Report and Order
Twenty-First Century Communications and Video)	•
Accessibility Act of 2010)	

PETITION FOR RECONSIDERATION

TVGuardian, LLC ("the Commenter"), pursuant to Section 1.429 of the Federal Communications Commission's ("FCC" or "Commission") Rules, hereby petitions for partial reconsideration of the Commission's *Report and Order* released on January 13, 2012 in the above-referenced matter. Specifically, the Commenter contends that the Commission incorrectly concluded that the Twenty-First Century Communications and Accessibility Act of 2010 ("CVAA") does not require Video Programming Providers ("VPPs") and Video Programming Distributors ("VPDs"), and digital video source devices to pass-through the closed captions data to the consumer equipment. As more fully described below, the Commenter maintains that not only is the Commission's interpretation inconsistent with the statutory language and intent of the CVAA and previous legislation, but the interpretations and rules made throughout the *Report and Order* actually make it impossible for Recording Devices to comply with Congress's mandate under the CVAA to *enable viewers the ability to activate and de-activate closed captions*, and that the interpretations and rules should be revised to create an environment in which Recording Devices may comply with this CVAA mandate.

¹ 47 C.F.R. § 1.429.

² 47 U.S.C. § 303(z)(1).

FCC Report and Order Ignores the Express CVAA Mandate

The CVAA mandate found in Section $203(b)(z)(1)^3$ regarding Recording Devices confirms that closed caption data pass-through is mandated from the video source devices to Recording Devices in at least some form by requiring that:

if achievable (as defined in section 716), apparatus designed to record video programming transmitted simultaneously with sound, if such apparatus is manufactured in the United States or imported for use in the United States, enable the rendering or the pass through of closed captions, video description signals, and emergency information (as that term is defined in section 79.2 of title 47, Code of Federal Regulations) such that viewers are able to activate and de-activate the closed captions and video description as the video programming is played back on a picture screen of any size.⁴

The Commenter maintains that no one can reasonably argue that this CVAA mandate is possible without some form of closed caption data pass-through to the recording device. More specifically, it is impossible for a recording device to allow viewers the ability to activate and de-activate the closed captions and video descriptions as the video programming is played back if only "open" (rendered) captions are passed through to the recording device from the video source device; therefore, the only logical conclusion is the video source device must pass-through the closed caption data in some manner.

Recording Device Mandate Clarifies Interconnection Mechanisms Mandate Apparent Ambiguity

The CVAA Section 203(b)(z)(2), requires that:

interconnection mechanisms and standards for digital video source devices are available to carry from the source device to the consumer equipment the information necessary to permit or render the display of closed captions and to make encoded video description and emergency information audible.⁵

The CVAA Section 203(b)(z) contains only two paragraphs. Both paragraphs address closed captions, with paragraph (1) addressing Recording Devices and paragraph (2) addressing the interconnection mechanisms and standards for digital source devices to carry the necessary information to connected consumer equipment. The Commenter maintains that these two paragraphs are intended to be interpreted together, and the term "Recording Devices" referred to in paragraph (1) does not just include

See id.

⁴ 47 U.S.C. § 303(z)(1) (emphasis added)

⁵ 47 U.S.C. § 303(z)(2).

VPD provided Recording Devices; the term actually includes all Recording Devices capable of being connected to digital video source devices in any wired or wireless manner. Similarly, paragraph (2) cannot be interpreted without including the Recording Devices mandate of paragraph (1); therefore, Congress intended for video source devices to pass-through closed captions data to other consumer equipment besides just Recording Devices using some undefined method. Regardless, the Commission ruled in conflict with this by finding "that it is sufficient, for purposes of this provision, if the video output of a digital source device renders the closed captioning in the source device."

The Commission continued with the following explanation: "Although we do not impose any additional regulations on interconnection mechanisms at this time, we note that we are interpreting an ambiguous statutory provision and, although we believe our interpretation is reasonable based on the record before us, we may revisit the issue if we find that our decision, in practice, does not provide the benefits to consumers that were intended by Congress." In paragraphs 116-119 of the *Report and Order*, the Commission continues explaining its ruling that it is sufficient for the source device to only render closed captions. Throughout the entire explanation of this ruling, however, the Commission failed to consider the statutory mandate requiring Recording Devices to allow viewers the ability to activate and de-activate the closed captions and video description as the video programming is played back on a picture screen of any size. Had the FCC considered the aforementioned Recording Device mandate, the FCC should have interpreted the word "permit" to mean permit the Recording Device or other consumer equipment to enable the viewer the ability to activate and de-activate the closed-captions. Since these devices can only possess this ability if they have access to the closed captions data in some manner, the Commission's ruling should have not been so broad to accept the rendering of closed captions from any and all outputs of the video source device as a substitute for the closed caption data pass-through requirement.

The Commenter contends that Congress neither intended for the pass-through of closed captions to be omitted from IP video (or else the term "pass-through" would have been eliminated from the CVAA), nor did Congress intend for the pass-through requirement to only apply to Recording Devices. By including

⁶ Report and Order, ¶ 115.

⁷ See Id.

through rule for connections in which the FCC determines that enforcement would actually be *technically infeasible*. For example, should the Commission determine that the pass-through of closed captions be technically infeasible over HDMI, the Commission could exempt HDMI from this requirement; however, to be in compliance with the aforementioned CVAA mandate, an HDMI supported Recording Device must be able to record the closed captions data using some other manner.

Given the Recording Device mandate, the Commenter maintains a more appropriate ruling, at a minimum, would require that all video source device outputs (wired or wireless) that are capable of connecting to a Recording Device's inputs, pass-through the closed caption data. Such a ruling would be consistent with the Commission's interpretation that HDMI outputs from the video source device are in compliance with the statutory language by only rendering the closed captions HDMI and not passing through the closed captions. Since the HDMI specification includes a copy-protection scheme known as High-Definition Copy Protection (HDCP), required to be licensed to use HDMI, manufacturers need to ensure that their products are HDCP-compliant. By definition, that HDCP-encoded video signal is designed to be unrecordable, therefore, HDMI inputs are not found on Recording Devices. Consequently, as long as HDMI inputs are not found on Recording Devices, HDMI would be exempt from the statutory mandate for video source devices to pass-through closed caption data to Recording Devices through all outputs capable of connecting to Recording Device inputs.

The Commission also noted that MoCA and DLNA currently support the pass-through of closed captions to consumer display devices⁹ and pointed out the fact that all cable operator-provisioned HD settop boxes are currently required (by December 1, 2012) to include a connection capable of delivering recordable HD video and closed captioning in a closed manner.¹⁰ The Commenter maintains that, if the Recording Devices that are able to record HD video from the cable operator-provisioned HD set-top boxes are also able to record IP video from other video source devices, these video source devices should also be

⁸ Report and Order, \P 117.

⁹ Report and Order, \P 115.

Report and Order, ¶ 119 (and related footnote 483)

required to pass-through the closed caption data over the connection methods (wired or wireless) available to the Recording Devices.

The CVAA Section 203(b)(z) spells out requirements for Recording Devices and for Interconnected Mechanisms and standards for the transfer of data from digital video source devices to consumer devices. The Commenter maintains that Congress's express intent for Recording Devices to receive the closed caption data from video source devices is clear and cannot be misinterpreted. The Commenter also maintains that when the two paragraphs of the CVAA Section 203(b)(z) are interpreted together, one can only conclude that Congress, in paragraph (b)(z)(1) of the Section, was including stand-alone Recording Devices that may be connected to a video source device.

The market today has many video source devices (e.g., Blu-ray players, DVD players) already equipped to play IP video and allow HDMI television viewing while also outputting recordable analog video through a composite video output. These devices send Line-21 data over the composite video output to the consumer equipment (e.g., television or Recording Device) when the Line-21 data is available. When closed caption data is provided with the IP video, these devices would likely deliver the closed caption data using this same method without requiring any hardware or software modification. Most of these video source devices even output synchronized HDMI and composite video simultaneously, thereby allowing the viewer to watch the programming via HDMI on their television while recording it using their connected Recording Device over the composite video output. That said, there are some video source devices that contain both HDMI outputs and composite outputs, but only allow one output to be active at a time. Such devices (e.g., PS3, Xbox 360, Roku XD) are capable of being connected to a Recording Device using the composite video output, and the Recording Device is capable of recording the analog video and audio; therefore, the Recording Device mandate would apply to these video source devices. However, with these particular devices, when an HDMI output is connected from the video source device, the composite video output is disabled, making it impossible to watch an IP delivered video via HDMI on a television while simultaneously recording it on the Recording Device. Since HDMI inputs are not found on Recording Devices, the consumers' only available output available for recording is the analog video output; therefore, the Commenter asks the Commission to consider the intent of Congress's mandate to allow Recording

Devices to record the closed caption data for later display during playback, and require all video source device outputs to be active simultaneously, or require another method be used to record closed captions data when using HDMI connections.

Other Considerations for Interpreting Closed Caption Data Pass-Through Rules

In light of the aforementioned CVAA mandate on Recording Devices, the Commission should not ignore how the application of this mandate has far-reaching effects on other interpretations and rules throughout the *Report and Order*.

VPP and VPD Applications, Plug-ins and Devices:

In light of the aforementioned Recording Devices mandate¹¹, the Commenter maintains that the Commission's rules regarding VPPs and VPDs obligations¹² should be revised so that a video programming distributor or provider that provides applications, plug-ins, or devices in order to deliver video programming must comply with the pass-through mandate by providing access of the closed caption data to the user of the applications, plug-ins, or devices.

Timing of Closed Captions Data Pass-Through from Video Source Devices:

The Commission is requiring VPOs to provide VPDs with captions of at least the same quality as the television captions provided for that programming.¹³ VPDs are also required to maintain (*i.e.*, not degrade) the quality of the captions provided by VPOs in enabling the rendering or pass-through of captions, and to transmit captions in a format reasonably designed to reach the end user in that quality.¹⁴ In evaluating whether the captions are of at least the same quality, the Commission stated that it will consider such factors as completeness, placement, accuracy, and timing.¹⁵ However, the Commission failed to address the timing of captions from video source devices by concluding that ensuring that timing data is

⁴⁷ U.S.C. § 303(z)(1)

¹² 47 C.F.R. 79.4(c)(2)(i)

¹³ Report and Order, \P 37.

See Id.

See Id.

properly encoded and maintained through the captioning interchange and delivery system is an obligation of Section 202 VPDs, and not of device manufacturers.¹⁶ The Commenter maintains that device manufacturers should be required to render *and* pass-through the closed captions data in some manner, together with the audio and video, with the same accuracy of timing received from the VPDs.

There are many MVPD provided video source devices for television that do not currently pass-through closed captions with the same timing as the rendered closed captions, and it is common for the MVPD to blame the VPOs for the timing issues, even if that's not truly the case. More often than not, the proper VPO timing of the closed caption data is delivered from the VPD to the video source device, but the video source device processes the data internally, and then passes it through to the consumer equipment with timing that's out of sync with the VPOs defined timing.

The Commenter maintains that when the closed captions data is received by the device with a certain VPO defined timing from the VPD, but the device's internal processes cause the closed captions data to pass-through one to five seconds or more behind the actual defined Audio/Video timing as it's received from the VPD, then the quality of the viewer experience suffers, and the device manufacturer should be held accountable.

Closed Captions with HDMI:

When considering HDMI, one cannot ignore the closed caption mandates for television under 47 C.F.R. 79.1 and 47 CFR 15.122. The pass-through of closed captions are required from the video source to the consumer equipment in 47 C.F.R 79.1,¹⁷ yet the MVPDs' devices and other HDMI capable devices have been given a free pass from complying with this mandate on HDMI outputs. Why is this the case? Commenter has searched the FCC database and the Federal Registry, and has not found any official "closed captions pass-through rule" exemption being granted to MVPDs and others for HDMI.

A summary of the HDMI Licensing argument, ¹⁸ the HDMI specification licensing agent, can be boiled down to the following: *Since HDMI has not been complying with the pass-through mandate thus far,*

Report and Order, \P 112.

¹⁷ 47 C.F.R. 7.1(c)

HDMI Licensing Reply at 4

if the FCC were to require HDMI to start passing through the closed caption data now, it would be too costly and would require HDMI manufacturers to add hardware to handle the additional information across HDMI connections. The Commenter disagrees with this assertion and refers to its own TVGuardian HD model¹⁹, which is basically a closed-caption decoder for HDMI that uses the composite video input to read the Line-21 closed caption data and then displays the closed-caption text onto the HDMI video output.

The TVGuardian HD product illustrates an alternative method of delivering the pass-through closed caption data from the video source device to the consumer equipment while viewing HDMI video. Specifically, consumer equipment could read the closed captions data over the composite video connection (or another connection) and display the closed captions on the HDMI video using the existing on-screen display capabilities. Since the consumer equipment already includes all the hardware required, only a simple software change and the addition of a user interface menu option (to select which composite video input to use for reading closed captions with HDMI) would provide a solution and give viewers the ability to control the display of all closed captions from the display device, as many people prefer.²⁰

However, the Commenter contends that the TVGuardian HD alternative method is not necessary, and it is actually possible for HDMI connections to carry the pass-through closed caption data. No additional hardware would be required, as HDMI Licensing argues. This data could be decoded using the already existing and required closed caption decoder found in digital televisions, and it can be accomplished with only a minor software change and possibly a slight design change. Not only does it not make any sense to allow an exception for HDMI, it circumvents Congress's express intent and contradicts the Commission's own ruling that a requirement should not be considered technically infeasible simply because it would be costly to implement, or that it involved physical modifications or alterations to the design of a product.²¹ As the Commission stated, "for the 'technically feasible' qualifier to be triggered, it must be more than merely difficult to implement captioning capability on the apparatus; rather, manufacturers must show that changes to the design of the apparatus to incorporate closed captioning

See http://tvguardian.com

²⁰ Report and Order, ¶ 118.

Report and Order, ¶ 97.

capability are not physically or technically possible. We believe that, as a general matter, if it is technically feasible for a manufacturer to include a video player in an apparatus, it is technically feasible for that manufacturer to include closed captioning functionality as well. That is, if an apparatus includes the complex functionality of a video player, which requires a relatively significant amount of processing power, it is technically feasible to include a significantly less computationally demanding functionality such as closed captioning, which requires significantly less processing power."²²

In addition to a statutory mandate to pass-through closed captions under 47 C.F.R. 79.1, the Commission aptly noted that many consumers prefer using the closed captioning features of the display devices and that some are frustrated by the caption functionality being in the video source device instead.²³ All of this considered, the Commission refrained from requiring pass-through of closed captioning on HDMI, but still felt compelled to encourage HDMI Licensing, the HDMI specification licensing agent, to include closed captioning provisions in future versions.²⁴ The Commenter contends that the Commission should not allow past failure to comply with the pass-through mandate to be a reason for granting an exception for continued failure to comply with this mandate, and accordingly, the Commission should require HDMI to pass-through closed caption data.

Digital televisions are already required to be equipped with closed caption decoders under 47 CFR 15.122. This mandated investment, required of TV manufacturers for many years now, should not be wasted by eliminating the pass-through requirement, or by omitting it from the most common connection used today for HD viewing: HDMI. Simultaneous closed caption data pass-through can be accomplished, either on the HDMI connection, or using an alternative method.

The Commenter maintains that the closed caption data pass-through rule should apply to HDMI; it is *technically feasible* and not costly. The simple fact that the Commission encouraged HDMI Licensing, the HDMI specification licensing agent, to include closed captioning provisions in future versions²⁵, leads

²² Report and Order, ¶ 98.

Report and Order, \P 118.

Report and Order, ¶ 119.

See Id.

one to believe the Commission does not believe that it is truly *technically infeasible* for HDMI to pass-through closed captions.

Conclusion

For the reasons stated throughout this Petition of Reconsideration, the Commenter requests that the Commission reconsider its rulings that effectively allow the pass-through of closed captions data to be omitted altogether. The realization that Recording Devices cannot comply with the CVAA mandate to allow viewers the ability to activate and de-activate the closed captions and video description as the video programming is played back on a picture screen of any size, effects more than just Recording Devices; its application has far-reaching effects that spread throughout the Report and Order. The Commission based several of its rulings and interpretations on language believed to be ambiguous, however, this language is no longer ambiguous when a bright light is shined upon the Recording Device mandate. The Commenter maintains that Congress neither intended for the pass-through of closed captions to be omitted from IP video (or else the term "pass-through" would have been eliminated from the CVAA), nor did the CVAA intend for the pass-through requirement to only apply to Recording Devices. By including the words "render or," Congress only wanted to give the FCC flexibility to grant exceptions to the pass-through rule for connections in which the FCC determines that enforcement would actually be technically infeasible. The Commenter maintains that the Commission should apply the CVAA's Recording Device mandate to its rulings and interpretations found throughout the Report and Order, and require the pass-through of closed captions from the video source devices to consumer equipment on all wired and wireless outputs in which it is technically feasible (at a minimum those connections able to connect to a Recording Device), with the same quality, including timing, as it is received from the VPDs.

Respectfully submitted,

/s/

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Dated: April 16, 2012